



# PPDG BaBar Needs and Plans

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PPDG Meeting



## BaBar's Need for the Grid

### Early 2000:

- The Grid? “Don’t bother me now, I’m working on the CP-violation result for Osaka”
- Data Transfer? “Something the French BaBarians do to justify the existence of their computer center”

### More recently:

- “The Grid? Yes we need it and it *has* to work”

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## BaBar's Need for the Grid

### What Happened?

- PEP II/BaBar has reached design (integrated) luminosity (131 TB in database by end June 2000)
- We all believe the plans to increase luminosity by a factor 8 by 2003
- BaBar data will grow faster than “Moore’s Law”

### Options:

- Pour French, British, Italian money into the SLAC Computer Center
- Make the Grid work

While simultaneously improving storage management

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## What Sort of Grid Services?

- Disk Caches will be the most costly (and therefore limited) component of each computing center
  - Use each center to cache data that are not cached elsewhere
  - Decompose large analysis tasks into components that are sent to the center hosting the data they need
- Services Required:
  - Reliable, automated, *fast, efficient*, data movement (urgent)
  - Reliable, automated, catalog transfer/synchronization (urgent)
  - Automated decomposition of analysis tasks into component tasks and reassembly of the component output (longer term)
  - Cached file access for bulky data (RAW, REC ...) that are not disk-resident anywhere (urgent)
  - Workable SLAC+CCIN2P3+RAL+CASPUR security infrastructure (urgent)

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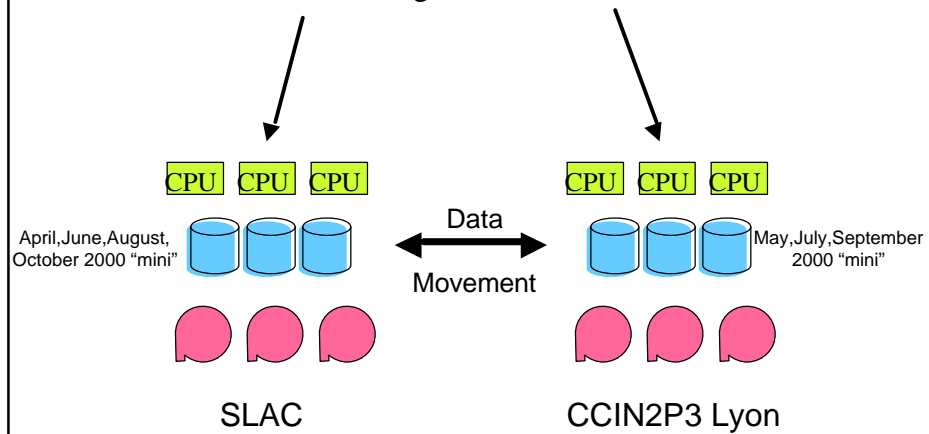
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## Example of BaBar Grid in 2000-2001

Physicists submit jobs to each computer center  
and merge the results



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